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(54) Title: METHOD AND SYSTEM FOR AN ADVANCED TELEVISION SYSTEM ALLOWING OBJECTS WITHIN AN ENCODED VIDEO SESSION TO BE INTERACTIVELY SELECTED AND PROCESSED

(57) Abstract: Method and system allowing the user of an Advanced Television/Interactive Multimedia Platform (IMP) to identify and select a plurality of objects contained within an Encoded Video Session (EVS). Information related to the user selected object(s) may be accessed via a graphic user interface, and further processed via an Internet Access Information (IAI) hyperlink. The method is accomplished by an IMP comprising: alternate television/Internet video display; icon command processing; Internet communication; split screen display; storage ability; displaying a user controlled cursor; displaying user selectable objects in a hi-lighted manner; displaying caption data relating to the selectable objects; receiving, decoding and processing EVS data which is comprised of the user selectable object(s) x and y co-ordinates, product caption data and an IAI Hyperlink (Video Object Information (VOI)).

METHOD AND SYSTEM FOR AN ADVANCED TELEVISION SYSTEM ALLOWING OBJECTS WITHIN AN ENCODED VIDEO SESSION TO BE INTERACTIVELY SELECTED AND PROCESSED

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Description

Method and system allowing the user of an Advanced Television/Interactive Multimedia Platform (IMP) to identify and select a plurality of objects contained within an Encoded Video Session (EVS).
10   Information related to the user selected object(s) may be accessed via a graphic user interface, and further processed via an Internet Access Information (IAI) hyperlink. The method is accomplished by an IMP comprising: alternate television/Internet video display; icon command processing; Internet communication; split screen display; storage ability;
15   displaying a user controlled cursor; displaying user selectable objects in a hi-lighted manner; displaying caption data relat-ing to the selectable objects; receiving decoding and processing EVS data which is comprised of the user selectable objects; receiving decoding and processing EVS data which is comprised of the user selectable objects (s) x & y co-ordinates;
20   product caption data and IAI Hyperlink (Video Object Information (VOI)).

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WHAT IS CLAIMED IS:

1.   A method and system allowing a user of an Advanced Television/Interactive Multimedia Platform (IMP) to identify and select a plurality of objects contained within an Encoded Video Session (EVS). The user selected objects can be accessed via a graphic user interface, and further processed an Internet Access Information (IAI) hyperlink.

2.   A method in accordance with claim 1, wherein the Advanced Television/Interactive Multimedia Platform (IMP) which comprises:

    (a)   a means of receiving, processing and displaying television, internet, and/or other multimedia communication signals simultaneously;

    (b)   a means of receiving direct user input commands;

    (c)   a means of displaying Command Icons (CI);

    (d)   a means of displaying a user controlled graphic cursor;

    (e)   a means of performing split screen window display; and

    (f)   a processor integrated with the Advanced Television/Interactive Multimedia Platform (IMP);

3.   An apparatus as in claim 1, further comprising a processor integrated with the Advanced Television/IMP which comprises:

    (a)   means of receiving, decoding, storing and processing an Encoded Video Session (EVS);

    (b)   means of identifying and separating Video Object Information (VOI) form Video Broadcast Data (VBD) contained within Encoded Video Session (EVS);

    (c)   means of decoding, storing and processing Video Object Information contained within Encoded Video Session (EVS);

(d)   means of pausing the display image upon receiving a user input command while displaying user selectable object(s) in a hi-lighted manner;

(e)   means of user selectable object(s) in a hi-lighted manner;

(f)   means of determining whether an object has been selected from the EVS display by comparing user input command, and the position attributed to the object as derived from the object's VOI;

(g)   means of retrieving and processing the VOI data associated with a user selected object;

(h)   a means of displaying Command Icons (CI) on the IMP display;

(i)   a means of receiving, processing and interpreting direct user input; and

(j)   a means of communicating via an Internet communication module.

4.   A method in accordance with claim 1, wherein the Advanced Television/Interactive Multi Media Platform (IMP) is capable of:

(a)   means of receiving, decoding, storing and processing an Encoded Video Session (EVS);

(b)   means of identifying and separating Video Object Information (VOI) form Video Broadcast Data (VBD) contained within Encoded Video Session (EVS);

(c)   means of decoding, storing and processing Video Object Information not contained within the Encoded Video Session (EVS), wherein the VOI is located in an alternate storage medium;

(d)   means of processing the VOI, wherein the VOI will/may contain:

i)   the user selectable object(s) x & y Co-ordinates;

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        ii)   product caption data; and

        iii)   an Internet Access Information (IAI) hyperlink.

5.   A method in accordance with claim 1 wherein the processor comprises:

    (a)   means of temporarily pausing the video display image upon receiving a User Requested Interrupt (URI);

    (b)   means of storing Video Broadcast Data (VBD) for the duration of the User Requested Interrupt (URI);

    (c)   means of displaying all User Selectable Objects (USO) in a hi-lighted manner (as in diagram 1);

    (d)   means of displaying a user controlled cursor;

    (e)   means of displaying a Command Icon (CI) for each user selectable object;

    (f)   means of displaying a Graphic User Interface within a Secondary Display Window (SDW);

    (g)   means of processing user commands, wherein the user commands may/will comprise:

        i)   a User Requested Interrupt (URI);

        ii)   direction control of the position of a graphic cursor on the video display image;

        iii)   selecting an object or an available action; via a User Command Confirmation (UCC);

    (h)   means of allowing the user to cancel a previously issued URI wherein causing the video session to resume processing and display of the VBD;

    (i)   means of resuming the processing and display of a paused VBD at the same video frame image that the URI was issued;

    (j)   means of processing a time-out interrupt, which time-out occurs in absence of user activity during a pre-defined period of time, wherein the processing of the time out interrupt

causes the interrupted video session to be resumed at the same video frame image that the URI was issued;

(k)   means of causing the VOI data to be displayed in a Graphic User Interface (GUI) which GUI is displayed within a Secondary Display Window (SDW), and the GUI may be of a appearance similar to the Graphic User Interface displayed in Diagram 2.

6.   The method of claim 3, claim 4 and claim 5 wherein the Advanced Television/IMP comprises:

(a)   means of displaying television, Internet and other multimedia communication data simultaneously on different windows of a split screen display; and

(b)   means of displaying product caption data while the VBD is in progress.

7.   The method of claim 3, wherein the video broadcast signal contains:

(a)   a VBD; and

(b)   an IAI hyperlink to the VOI.

8.   The apparatus described in claim 3, wherein the processor comprises:

(a)   a means of processing television, internet or other multimedia communication data simultaneously;

(b)   a means of identifying and processing a VOI Hyperlink contained within the video broadcast signal; and

(c)   a means of retrieving the VOI from a remote storage location;

(d)   a means of decoding starring and processing the VOI prior to/or simultaneously with the processing of the VBD.

9.   The apparatus described in claim 3, wherein the processor com-
prises:

(a)   a means of simultaneously processing television internet or
other multimedia communication data;

(b)   a means of receiving and storing VOI prior to receiving the
video broadcast signal; and

(c)   a means of identifying the precise video frame image where
the URI was issued;

(d)   a means of processing the VOI prior to/or simultaneously
with the processing of the VBD.

10.   The apparatus described in claim 3, wherein the processor com-
prises:

(a)   a means of simultaneously processing television internet or
other multimedia communication data;

(b)   a means of identifying the precise video frame image where
the URI was issued:

(c)   a means of locating an IAI hyperlink previously stored within
the processor memory;

(d)   a means of processing the IAI hyperlink to a remote storage
location location;

(e)   a means of retrieving from a remote storage location VOI
associated with the video frame image where the URI was
issued;

(f)   a means of decoding storing and processing the VOI prior
to/or simultaneously with the processing of the VBD.

11.   A method wherein:

(a)   a means of processing the URI request where the video
display image will divide into a plurality of windows, of
which one window will display the un-paused VBD, while the

secondary display window (SDW) will display the GUI where the Graphic User Interface (GUI) comprises:

i)   a means of displaying User Selectable Object's (USO) in a hi-lighted manner (Diagram 1);

ii)   Product Caption Window (Diagram 3);

iii)   user Command Icons (CI); and

iv)   further processing via an IAI hyperlink.

12.   The method of claim 1, claim 2 and claim 3 wherein the processing of the VOI can be delayed and stored for processing at a later time.

13.   The method of claim 11 wherein a plurality of objects may be selected, stored and subsequently executed.

14.   A method to execute a user selected IAI hyperlink and CI command pre-stored during a previous session.

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7   G06F17/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7   G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 47084 A (SHARP KK) 22 October 1998 (1998-10-22) abstract page 3, line 13 -page 5, line 20; figure 1 page 6, line 19 -page 8, line 15; figure 3	1-4,6,9, 12,14
X A	EP 0 840 241 A (IBM) 6 May 1998 (1998-05-06) abstract column 4, line 4 -column 5, line 9; figures 1,2	1-4 5
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[X] Further documents are listed in the continuation of box C.   [X] Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 September 2000	22/09/2000
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Polzer, A

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INTERNATIONAL SEARCH REPORT

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	"MULTIMEDIA HYPERVIDEO LINKS FOR FULL MOTION VIDEOS" IBM TECHNICAL DISCLOSURE BULLETIN,US,IBM CORP. NEW YORK, vol. 37, no. 4A, 1 April 1994 (1994-04-01), page 95 XP000446196 ISSN: 0018-8689 the whole document ---	1,2
A	ANHALT N ET AL: "INTERAKTIVES VIDEO IM INTERNET" RUNDFUNKTECHNISCHE MITTEILUNGEN,DE,MENSING. NORDERSTEDT, vol. 42, no. 4, December 1998 (1998-12), pages 126-133, XP000799261 ISSN: 0035-9890 page 129, right-hand column, line 12 -page 132, left-hand column, line 17; figures 7-12 -----	1,11,14

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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